

CLAIMS

What is claimed is:

5 1. A virtual machine, comprising:
class structure for holding one or more of a set
of predefined classes for use by an application
program that executes under the virtual machine;
class loader that obtains one or more of the
10 predefined classes from a network server and that
stores the predefined classes into the class
structure;
memory manager that purges selected ones of the
predefined classes from the class structure so as to
15 optimize the use of memory resources consumed by the
predefined classes in the class structure.

2. The virtual machine of claim 1, wherein the
network server is an HTTP server that exports a set
20 of class files containing one or more of the
predefined classes.

3. The virtual machine of claim 2, wherein the
class loader includes an HTTP client that generates
25 an HTTP GET command that specifies a particular one
of the class files and provides the HTTP GET command
to the HTTP server in response to a request to load a
particular one of the predefined classes.

30 4. The virtual machine of claim 3, wherein the HTTP
GET command specifies a URL for the particular one of
the class files.

5. The virtual machine of claim 2, wherein the virtual machine is provided with a class definition statement that specifies one or more URLs for the class files.

5

6. The virtual machine of claim 1, wherein the memory manager purges a least recently used one of the predefined classes from the class structure if the least recently used class is not in use.

10

7. The virtual machine of claim 6, wherein the memory manager purges a next least recently used one of the predefined classes if the least recently used class is in use.

15

8. The virtual machine of claim 7, wherein the memory manager purges a set of objects associated with the least recently used or the next recently used one of the predefined classes purged from the class structure.

20

9. The virtual machine of claim 7, wherein the memory manager purges the least recently used or the next recently used one of the predefined classes at periodic times.

25

10. The virtual machine of claim 7, wherein the memory manager purges the least recently used or the next recently used one of the predefined classes if available memory resources fall below a predetermined threshold level.

*SNO
P2*

11. The virtual machine of claim 7, wherein the memory manager purges the least recently used or the next recently used one of the predefined classes during system idle periods.

5

Sub R3
12. A method for class loading in a virtual machine, comprising the steps of:

obtaining one or more of a set of predefined classes from a network server;

10 storing the predefined classes into a class structure for use by an application program that executes under the virtual machine;

15 purging selected ones of the predefined classes from the class structure so as to optimize the use of memory resources consumed by the predefined classes in the class structure.

13. The method of claim 12, wherein the step of obtaining includes the step of generating an HTTP GET command that specifies a particular one of the class files and providing the HTTP GET command to an HTTP server in response to a request to load a particular one of the predefined classes.

25 14. The method of claim 13, wherein the step of purging includes the step of purging a least recently used one of the predefined classes from the class structure.

30 15. The method of claim 14, wherein the step of purging includes the step of purging a set of objects associated with the class purged from the class structure.

Sub At

16. A device, comprising:
memory that holds a class structure for storing
one or more of a set of predefined classes for use by
an application program;

5 processor that executes the application program
and a class loader that when executed obtains one or
more of the predefined classes from a network server
and stores the predefined classes into the class
structure for use when executing the application

10 program, the processor further executing a memory
manager that when executed purges selected ones of
the predefined classes from the class structure so as
to optimize use of the memory.

15 17. The device of claim 16, wherein the memory
manager is executed at periodic times.

18. The device of claim 16, wherein the memory
manager is executed if available resources in the
20 memory falls below a predetermined threshold level.

19. The device of claim 16, wherein the memory
manager is executed during system idle periods.